

What Is Claimed Is:

1 1. A method for increasing image resolution in a palm print scanner,
2 comprising the steps of:

- 3 (1) synchronizing a nutating mirror with a camera frame sync;
4 (2) scanning a frame of an image at a first nutation position;
5 (3) positioning the nutating mirror by a fraction of a pixel amount in
6 one direction to obtain a next nutation position;
7 (4) scanning the frame of another image at the next nutation position;
8 (5) repeating steps (3) and (4) until an image is obtained for each
9 nutation position needed; and
10 (6) mapping sub-pixels from each of the images obtained in steps (2),
11 (4), and (5) to an image of pixels having a higher resolution than the
12 respective images of sub-pixels.

1 2. The method of claim 1, wherein step (6) comprises the steps of:

- 2 (a) gathering each image of sub-pixels from memory;
3 (b) allocating memory for the higher resolution image;
4 (c) mapping sub-pixels from the first nutation position image onto the
5 higher resolution image; and
6 (d) interlacing sub-pixels from each of the images obtained in steps
7 (4) and (5) onto the higher resolution image.

1 3. A palm print imaging system, comprising:

- 2 a light emitting diode (LED);
3 an illuminator mirror;
4 a condenser lens;
5 a conformable prism, wherein said LED, said illuminator mirror, and said
6 condenser lens provide color illumination to said conformable prism to obtain an
7 image reflected from said conformable platen;

8 a plurality of mirrors;
9 a nutating mirror, wherein said plurality of mirrors direct said image to
10 said nutating mirror;
11 a driver for controlling said nutating mirror; and
12 a camera for capturing said image,
13 wherein said camera provides signals to said driver to synchronize said
14 nutating mirror with camera frame syncs.

1 4. The system of claim 3, wherein said conformable prism is spring loaded.

1 5. The system of claim 3, wherein said conformable prism is used as a palm
2 platen.

1 6. The system of claim 3, wherein said nutating mirror is repositioned to
2 obtain a plurality of images, wherein said plurality of images are used in an
3 interlacing recombining scheme to obtain a higher resolution image.

1 7. The system of claim 3, wherein said nutating mirror is two-dimensional
2 and programmable to allow movement in two different axial directions.

1 8. The system of claim 3, wherein said conformable prism is comprised of
2 a silicone pad.